

**UNITED STATES DISTRICT COURT
DISTRICT OF MASSACHUSETTS**

SINGULAR COMPUTING LLC,

Plaintiff,

v.

GOOGLE LLC,

Defendant.

Civil Action No. 1:19-cv-12551-FDS

Hon. F. Dennis Saylor IV

PLAINTIFF'S OPPOSITION TO GOOGLE'S MOTIONS IN LIMINE

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I. GOOGLE'S MOTION IN LIMINE NO. 1

Google's MIL No. 1 seeks to preclude Singular from offering any evidence or argument concerning the many interactions, communications and meetings between the Parties prior to 2017. Google claims that pre-2017 evidence is irrelevant because Google did not know about Singular's patents until one of its in-house lawyers actually decided to read the patents on the eve of first infringement in March 2017. The Motion should be denied because it is based on a false premise: in fact, Google was aware of the patents for years prior to 2017, thus the pre-2017 evidence is relevant to at least three questions of fact the jury must decide.

First, the evidence is relevant to determine when Google first learned about the patents. There is evidence from which a jury could conclude that Google knew about the patents while they were pending and after they issued. Second, contrary to Google's assertions, pre-2017 interactions between the Parties and Google's internal communications about those interactions, are highly relevant to Singular's willfulness case. The jury must determine whether Google knew or should have known about the patents, whether Google willfully avoided learning what the patents covered and, ultimately, whether Google copied the patented invention. Finally, that same evidence is relevant to Singular's validity case. Specifically, it includes evidence that goes to skepticism, praise, copying, and other objective indicia of non-obviousness that should be evaluated by the jury.

For all these reasons, there is no basis to exclude evidence concerning pre-2017 communications and interactions between the Parties. Its probative value outweighs any prejudice to Google. Google's MIL No. 1 should be denied in its entirety.

A. Legal Standards

1. Willfulness.

The patentee has the burden of proving willful infringement by a preponderance of the evidence. *Octane Fitness, LLC v. ICON Health & Fitness, Inc.*, 572 U.S. 545, 557-58 (2014); see also *Arctic Cat, Inc. v. Bombardier Rec. Prods., Inc.*, 876 F.3d 1350, 1371 (Fed. Cir. 2017). The test for willfulness is whether the alleged infringer knew “or should have known” that its conduct was willful. *WesternGeco LLC v. ION Geophysical Corp.*, 837 F.3d 1358, 1362 (Fed. Cir. 2016). This must be determined from the totality of the circumstances. See, e.g., *Knorr-Bremse Sys. fur Nutzfahrzeuge GmbH v. Dana Corp.*, 383 F.3d 1337, 1342-43 (Fed. Cir. 2004).

Conduct occurring prior to issuance of an asserted patent may be considered in determining willful infringement. See, e.g., *Minn. Mining & Mfg. Co. v. Johnson & Johnson Orthopaedics, Inc.*, 976 F.2d 1559, 1581 (Fed. Cir. 1992) (“although willfulness is generally based on conduct that occurred after a patent issued, pre-patent conduct may also be used to support a finding of willfulness”); see also *Kaufman v. Lantech, Inc.*, 807 F.2d 970, 978-79 (Fed. Cir. 1986). Thus, a patentee “can rely on evidence of conduct from prior to [the date of issuance] to show what [the accused infringer’s] state of mind would have been [at the time of issuance] or later.” *Pelican Int’l, Inc. v. Hobie Cat Co.*, No. 3:20-cv-02390, 2023 WL 2127994, at *17 (S.D. Cal. Feb. 10, 2023).

Proof of willfulness includes evidence that the alleged infringer’s conduct was “willful, wanton, malicious, bad-faith, deliberate, consciously wrongful, flagrant, or – indeed – characteristic of a pirate.” *Halo Elecs., Inc. v. Pulse Elecs., Inc.*, 579 U.S. 93, 103-04 (2016). This includes evidence that an alleged infringer was willfully blind to the patent rights of another. See, e.g., *Global-Tech Appliances, Inc. v. SEB S.A.*, 563 U.S. 754, 769 (2011). A willfully blind defendant is one who: (1) believes that there is a high probability a fact exists, and

(2) takes deliberate actions to avoid learning of that fact. *Id.*¹ Such proof also includes evidence that the alleged infringer copied the patentee's technology. *See, e.g., Eko Brands, LLC v. Adrian Rivera Maynez Enters., Inc.*, 946 F.3d 1367, 1379 (Fed. Cir. 2020).

Communications that predate any asserted patent are particularly relevant to willfulness if they constitute “egregious behavior.” *Sonos, Inc. v. D&M Holdings Inc.*, No. 14-1330-WCB, 2017 WL 5633204, at *4 (D. Del. Nov. 21, 2017).² Courts have also admitted pre-issuance evidence of willfulness when it shows the defendant copied the plaintiff’s invention. *Id.* at *3-4.

2. Non-Obviousness.

Google intends to put on evidence that the patents-in-suit are invalid as obvious. Objective indicia of non-obviousness are evaluated to guard against the use of hindsight when analyzing obviousness. *WBIP, LLC v. Kohler Co.*, 829 F.3d 1317, 1328 (Fed. Cir. 2016). Indeed, the Federal Circuit has held that “evidence of secondary considerations may often be the most probative and cogent evidence in the record.” *Stratoflex, Inc. v. Aeroquip Corp.*, 713 F.2d 1530, 1538 (Fed. Cir. 1983). Several of these considerations are relevant here, including skepticism, praise for the invention, and copying. “Copying the claimed invention, rather than one within

¹ This decision addressed the knowledge requirement under 35 U.S.C. §271(b). Courts have extended this rationale recognizing that facts supporting willful blindness can satisfy the knowledge requirement for willful infringement. *See Corephotronics, Ltd. v. Apple, Inc.*, No. 17-CV-06457-LHK, 2018 WL 4772340, at *9 (N.D. Cal. Oct. 1, 2018); *see also Ansell Healthcare Prod. LLC v. Reckitt Benckiser LLC*, No. 15-CV-915-RGA, 2018 WL 620968, at *6 (D. Del. Jan. 30, 2018) (recognizing “it is likely that willful blindness could apply in willful infringement cases”); *Motiva Pats., LLC v. Sony Corp.*, 408 F. Supp. 3d 819, 837 (E.D. Tex. 2019) (“Since the Supreme Court has explained that willful blindness is a substitute for actual knowledge in the context of infringement, it follows that willful blindness is also a substitute for actual knowledge with respect to willful infringement.”).

² Google’s citation to *Sonos* attempts to imply that Courts only admit pre-issuance evidence of willfulness only when copying can be shown. The cases collected in *Sonos* state that conduct occurring prior to issuance of an asserted patent may be considered in determining willful infringement. *Citing Minn. Mining & Mfg. Co. v. Johnson & Johnson Orthopaedics, Inc.*, 976 F.2d 1559, 1581 (Fed. Cir. 1992).

the public domain, is indicative of non-obviousness.” *Windsurfing Int’l, Inc. v. AMF, Inc.*, 782 F.2d 995, 1000 (Fed. Cir. 1986). Copying is a question of fact and the jury is entitled to credit Singular’s evidence over Google’s. *WBIP, LLC*, 829 F.3d at 1336. The Federal Circuit in *WBIP* allowed pre-patent issuance evidence of copying in its obviousness analysis. *Id.* Skepticism is shown where “[d]oubt or disbelief by skilled artisans regarding the likely success of a combination or solution weighs against the notion that one would combine elements in references to achieve the claimed invention.” *Id.* at 1335.

B. Argument

1. Communications and Interactions Before The Patents Issued Are Directly Relevant To The Parties’ Claims and Defenses.

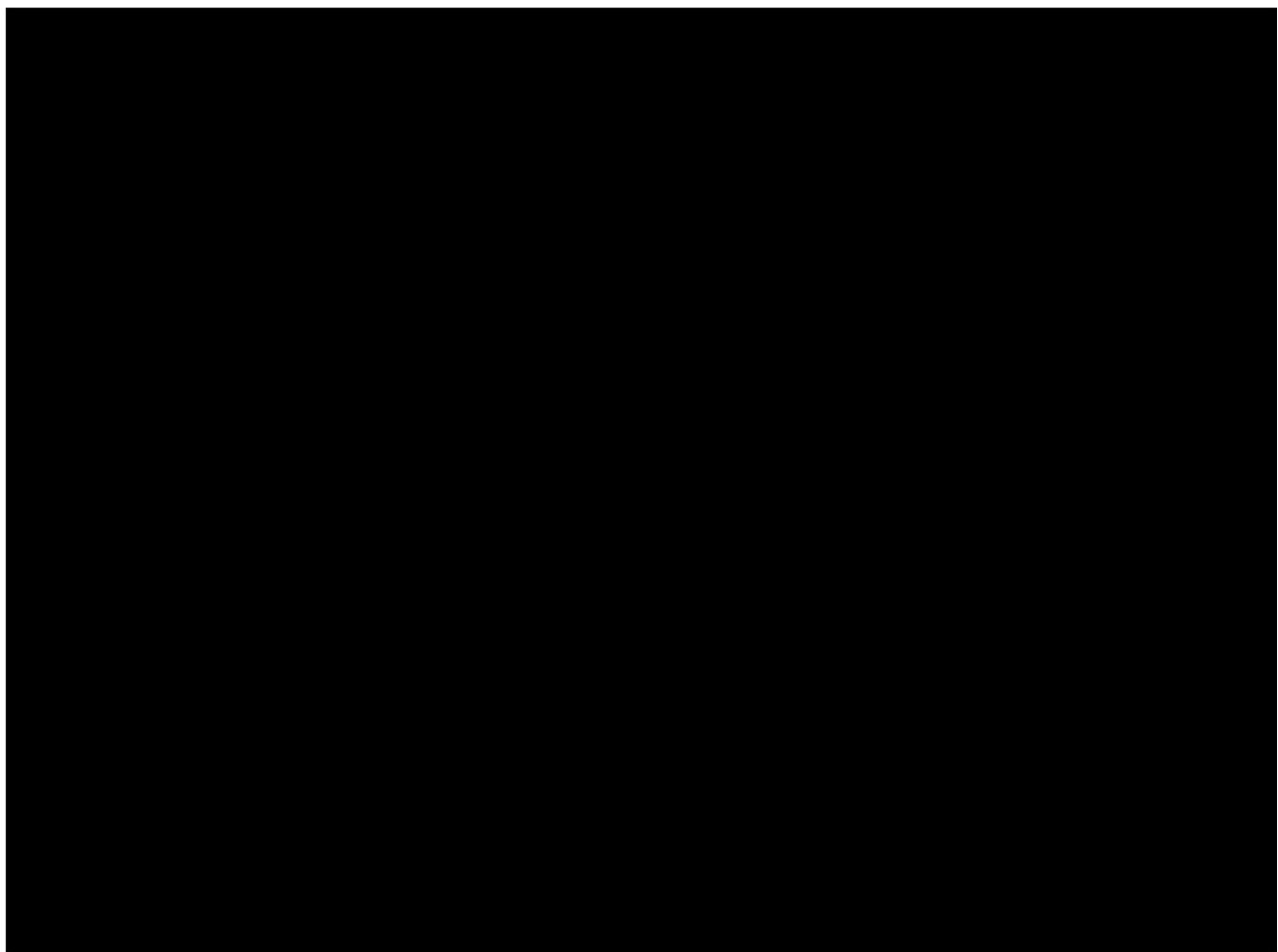
Communications and interactions between the Parties before patents issued are relevant to disputed issues concerning (1) whether Google willfully infringed Singular’s patents, and (2) whether Singular’s patents are valid. The evidence is relevant to both questions and its probative value outweighs any prejudice to Google.

2. Pre-Issuance Evidence Is Admissible To Establish Willfulness.

Google misstates the law regarding the admissibility of pre-issuance communications. It claims that such evidence is admissible only when it shows copying or “particularly egregious behavior.” Google Br. at 2-3. Google is wrong. Under Federal Circuit law, “a finding of willful infringement is made after considering the totality of the circumstances” and is a question for the fact finder after considering the evidence and witness testimony. *Liquid Dynamics Corp. v. Vaughan Co., Inc.*, 449 F.3d 1209, 1225 (Fed. Cir. 2006) (“The drawing of inferences, particularly in respect of an intent-implicating question such as willfulness, is peculiarly within the province of the fact finder that observed the witnesses.”) (internal quotations and citations omitted). While “willfulness is generally based on conduct that occurred after a patent issued,

pre-patent conduct may also be used to support a finding of willfulness.” *Minn. Mining & Mfg. Co. v. Johnson & Johnson Orthopaedics, Inc.*, 976 F.2d 1559, 1581 (Fed. Cir. 1992) citing Kaufman, 807 F.2d at 978-79); *see also Pelican Int'l, Inc. v. Hobie Cat Co.*, No. 3:20-cv-02390, 2023 WL 2127994, at *17 (S.D. Cal. Feb. 10, 2023) (holding that pre-issuance conduct is relevant to determining the defendant’s “post-issuance state of mind.”).

The evidence concerning pre-issuance communications and interactions between the Parties and internally at Google are relevant to willfulness. For example:



³ Astro Teller knew Dr. Bates from being a former student of Dr. Bates’ at Carnegie Mellon University.

⁴ Unless otherwise noted, all exhibits are attached to the accompanying Declaration of Kevin Gannon.

3. Pre-Issuance Evidence Is Relevant To Establish Objective Indicia of Non-Obviousness.

The pre-issuance communications Google seeks to exclude include Google communications analyzed in Dr. Khatri's expert report for the purposes of assessing objective indicia of non-obviousness. The communications are primarily email responses to the detailed disclosures of his invention that Dr. Bates made to Google. *See Ex. G, ¶¶ 223-227.*

Dr. Khatri's summary of those detailed disclosures includes every aspect of Dr. Bates' technology as claimed in the claims in suit. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

4. There Is No Legal Basis To Exclude Evidence Concerning Communications After an Asserted Patent Issued, But Before 2017.

Google again misstates the law to argue that communications between Google and Singular after the patents issued but before 2017 "are not relevant to any fact of consequence." Google Br. at 5-7. As an initial matter, there is no relevant difference between pre-issuance and

post-issuance communications when it comes to what facts are relevant because both situations are examined by considering the “totality of the circumstances. *Liquid Dynamics Corp.*, 449 F.3d at 1225 (Fed. Cir. 2006). To try and support its argument, Google erroneously states that the cases it cites stand for the “well-established law that communications which fail to ‘specifically identify’ the asserted patents cannot support a claim of willfulness.” Google Br. at 5. Google misreads those cases. First, in the *Sonos* case, the Court was deciding a motion to dismiss a willfulness claim where the patent owner had sent notice letters but did not identify the patents-in-suit and also failed to plead other factors that may have shown the accused infringer (Google) *should* have known about the patents-in-suit. *Sonos, Inc. v. Google*, 591 F.Supp.3d 638 (N.D. Cal. 2022). Thus, Google’s own case cite shows that facts demonstrating an accused infringer should have known about patents is enough to establish knowledge of the patents. Similarly, in the *Sprint* case, a letter that simply invited licensing discussions regarding Sprint’s patent portfolio without mentioning any patents or any technology was not enough to show knowledge of the patents. *Sprint Communications Co. L.P. v. Cequel Communications, LLC*, No. 18-1752-RGA, 2022 WL 421336, at *1 (D. Del. Jan. 13, 2022).

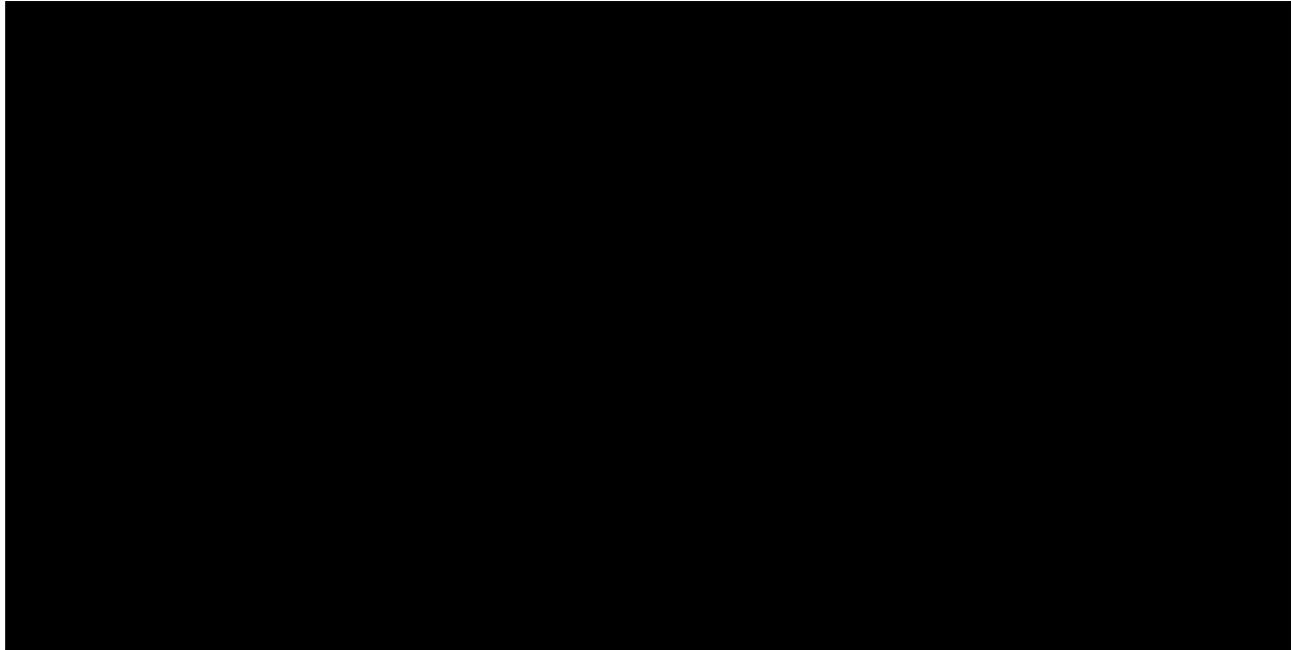
Here, to the contrary, there is more than ample evidence after the patents issued to show that Google at least should have known about Singular’s patents after they issued. For instance,

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]



Ex. H, at p. 18. *See also* Ex. I (Dr. Bates' January 24, 2014 transmission of yet another technical presentation to Google's Nanette Boden, and key TPU architect Norm Jouppi for). [REDACTED]

[REDACTED]
[REDACTED]. *Id.* at p. 17.

A cursory patent search by Google in or after September 2013 would have found Singular's patents and would also have revealed the existence of additional patent applications. Even if Google's uncorroborated interrogatory response stating that Google did not learn of the asserted patents until 2017 is to be believed, the fact remains that Google *should* have performed such a patent search, and therefore should have known about the existence of Dr. Bates' patents and patent applications. The jury can reasonably assume that Google did not want to find Singular's patents and chose instead to continue in willful blindness of their existence. *See Global-Tech*, 563 U.S. at 769 (a willfully blind defendant is one who: (1) believes that there is a high probability a fact exists, and (2) takes deliberate actions to avoid learning of that fact); *see also SiOnyx*, 330 F. Supp.3d at 612. In the meantime, Google continued developing the accused TPU products willfully blind to the inventions described and claimed in Singular's patents.

Excluding pre-2017 post-issuance communications would result in withholding from the jury communications that are highly probative to the issue of willfulness. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Google also argues that the communications cannot be relevant to non-obviousness “because Singular cannot show a nexus between these communications, which are about the idea of approximate computing, and the claimed invention . . .” Google Br. at 6. Google ignores Dr. Khatri’s report, which repeatedly points out the very nexus that Google claims to be missing:

- After presenting several statements regarding the presence of the objective indicium of skepticism in this case (*see* Ex. G, ¶¶ 228-233), Dr. Khatri states “There is a clear nexus between these statements and the Asserted Claims. They were written in response to Dr. Bates’ disclosure of the invention in multiple presentations to Google, which, as explained above, relate to computing systems that include large numbers of “approximate” (i.e. “low precision”) arithmetic units. *See* §III.H.1.” *Id.*
- After presenting evidence of the objective indicium of unexpected results (*id.*, ¶¶ 234-237), Dr. Khatri states that “[t]here is a clear **nexus** between these unexpected results and the Asserted Claims. They are included in Dr. Bates’ disclosure of the invention in multiple presentations to Google, which, as explained above, relate to computing systems

that include large numbers of “approximate” (i.e. “low precision”) arithmetic units. *See* §III.H.1.” *Id.* ¶¶ 238.

- After presenting evidence of the objective indicium of praise, (*id.*, ¶¶ 241-243), Dr. Khatri states, “There is a clear **nexus** between the praise cited above and the Asserted Claims. It relates directly to Dr. Bates’ slide presentations that he presented to Google between 2010 and 2014 (which directly relate to the Asserted Claims, as I explain above in §III.H.1) and to additional information provided to Google relating to the inventions of the Asserted Claims (e.g., the email to Andrew Ng, excerpted above).” *Id.* ¶ 244.
 - In presenting evidence of the objective indicium of copying, Dr. Khatri states at ¶ 251 that “a **nexus** with the claimed invention is presumed for secondary considerations relating to Google’s TPUv2 and TPUv3 products, because these products are coextensive with the Asserted Claims, and because the claimed invention is, by Google’s own admission, the secret to the high performance of the TPUv2 and TPUv3 products. *See* §III of my Opening Expert Report (explaining how the TPUv2 and TPUv3 devices meet every requirement of the Asserted Claims); see also *id.* at §VI (explaining that the Asserted Claims are responsible for a significant percentage of the added value of the TPUv2 and TPUv3 devices over their respective alternatives).” *Id.*
- Dr. Khatri states that Google communications evidencing copying by Google were responses to Google becoming “specifically aware that Dr. Bates had a patent covering the material he had presented to Google in 2010 and 2013,” referring to the presentations Dr. Khatri previously described in his report in ¶¶ 223-227 as disclosing each and every limitation of the claims in suit.

5. The Content of the Pre-2017 Communications Is Directly Relevant to the Asserted Claims.

Google’s argument that pre-2017 evidence is irrelevant rests on the notion that this evidence relates to “approximate computing,” which is somehow different from the Asserted Claims, which are “directed to specific hardware with specific error requirements.” This is incorrect: “approximate computing” – true to its name – means performing computations and getting approximate results, which is exactly what the claims at issue in this case are about (*see, e.g.*, claim 7 of the ’156 patent, which recites that the outputs of a computation “differs from the exact mathematical result”). That is, the LPHDR execution units of the Asserted Claims yield “approximate” results, and therefore perform “approximate computing.” [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Further, the pre-2017 evidence does not merely discuss “approximate computing” as an abstract idea, as Google alleges. Google Br. at 3. [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]. *See* Khatri Dec., ¶¶ 7-19. [REDACTED]

[REDACTED]

[REDACTED] *See id.*, ¶¶ 10-11. Finally, as Dr. Khatri’s declaration explains, from the start, Dr. Bates’ disclosures to Google disclose systems in which the number of LPHDR execution units “exceeds by at least 100” the number of full-precision multipliers in the system. *See id.*, ¶ 12.

Therefore, for the reasons explained above, pre-2017 communications and presentations, including presentations about “approximate computing,” relate directly to the inventions of the Asserted Claims and are therefore relevant to the questions of willfulness and non-obviousness identified above.

6. Pre-2017 Communications can be used to show that Google knew about the patents before 2017.

Google’s motion is based on a faulty premise, namely that Google did not know about Singular’s patents until 2017 is an established fact. The evidence cited above demonstrates that the jury may find differently as the jury is allowed to determine, with direct or circumstantial evidence, when Google first knew of Singular’s patents. *WCM Indus., Inc. v. IPS Corp.*, 721 F. App’x 959 (Fed. Cir. 2018); *see also, Bio-Rad Labs., Inc. v. 10X Genomics, Inc.*, No. 19-CV-12533-WGY, 2020 WL 2079422 (D. Mass. Apr. 30, 2020). The evidence Google seeks to exclude demonstrates continued notice by Dr. Bates to Google of Singular’s intellectual property and patented technology along with Google’s high interest in it. The jury should be allowed to hear this evidence to determine whether Google knew about or was willfully blind to Singular’s patents prior to 2017.

Google argues that Singular should not be permitted to use terms such as “stealing,” “theft,” “copying,” “misappropriating,” “pirating,” “trespassing,” or any similar terms. Google MIL No. 2 at 7. An outright pre-trial exclusion of such terms cannot possibly be justified. In *Halo*, the Supreme Court itself used such terms in the context of willful infringement. *See Halo*, 579 U.S. at 103-04 (conduct that is “willful, wanton, malicious, bad-faith, deliberate, consciously wrongful, flagrant or – indeed – characteristic of a pirate); *see also id.* at 104 (willfulness is akin to “steal[ing] the patentee’s business”); *id.* at 106 (Section 284 allows district courts to “punish the full range of culpable behavior”). This Court recognized such conduct as evidence of

willfulness in the *SiOnyx* case. See *SiOnyx*, 330 F. Supp.3d at 608. Accordingly, the better course of action is to deny the motion *in limine*, wait until trial, and rule on any objections in context at that time.

Google argues that claims of misappropriation and copying are not relevant to proving willful infringement. Google MIL No. 2 at 7-8. Google is wrong. As stated in Section I.A.1, willfulness is determined in light of the totality of the circumstances. *See, e.g., Knorr-Bremse v. Dana Corp*, 383 F.3d at 1342. According to the Federal Circuit, this evidence includes “whether the infringer deliberately copied the ideas or design of another.” *Bott v. Four Star*, 807 F.2d at 1572. Google attempts to circumvent this controlling law by arguing that “whether infringement was willful turns on what the accused infringer *knew*, not what they *did*.” Google MIL No. 2 at 8 (emphasis by Google). That is a semantic argument that should be rejected as contrary to law. In any event, as set forth in Section I.B.2, the evidence shows that Google knew that it was copying Singular’s invention. This evidence includes the numerous presentations Dr. Bates made to Google engineers detailing the technical features of the invention; his numerous notices therein that his invention was patent-protected; and Google’s willful blindness to such notices.

Google’s argument that “any willfulness argument should be focused solely on whether Google was aware of the asserted patents and knew that its design of the TPU infringed those patents” (Google MIL No. 2 at 7-8) should be rejected as legally incorrect for two reasons. First, as set forth in Section I.B.2, conduct occurring prior to issuance of an asserted patent may be considered in determining willful infringement. *See, e.g., Minn. Mining & Mfg. v. Johnson & Johnson*, 976 F.2d at 1581 (“pre-patent conduct may also be used to support a finding of willfulness”); *see also Kaufman v. Lantech*, 807 F.2d at 978-79. Thus, a patentee “can rely on evidence of conduct from prior to [the date of issuance] to show what [the defendant’s] state of

mind would have been [at the time of issuance] or later.” *Pelican Int’l v. Hobie Cat*, 2023 WL 2127994, at *17. Second, Google’s willful blindness to Singular’s patent rights is evidence of willfulness. *See, e.g., Global-Tech v. SEB*, 563 U.S. at 769. Thus, Google cannot escape willfulness by arguing that it was not aware of Singular’s patents and, therefore, did not know it was infringing.

Google argues that Singular’s allegations of willfulness are not relevant to copying as a secondary consideration of nonobviousness. Google MIL No. 2 at 9-10. According to Google, the technical information that Dr. Bates provided to Google “principally described broad ideas about approximate computing or LPHDR execution units.” *Id.* at 9. The jury can determine that Google is incorrect because the presentations disclosed the details of Dr. Bates’ invention, not “broad ideas.” [REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

See Ex. J. This specific technical information is not merely a “broad idea.” Such documents are evidence of copying that is relevant to the objective indicia of non-obviousness. *See, e.g., Liqwd, Inc. v. L’Oreal USA, Inc.*, 941 F3d 1133, 1137 (Fed. Cir. 2019).⁵

⁵ Google argues that, during IPR, the Patent Office stated that “low-precision arithmetic” was not novel. Google MIL No. 2 at 9-10. That is irrelevant because the asserted claims do not broadly

Finally, Google argues that evidence characterizing Google's conduct as copying etc. would be highly prejudicial and likely to confuse the jury. Google MIL No. 2 at 10-11. This argument should be rejected. “[V]irtually all evidence is prejudicial.” *Davignon v. Hodgson*, 524 F.3d 91, 113 (1st Cir. 2008). Under Google’s theory, evidence of copying etc. would never be admissible to prove willfulness because it is always highly prejudicial. But that is not the law. Under controlling Federal Circuit law, “whether the infringer deliberately copied the ideas or design of another” is a factor relevant to the issue of willfulness. *See, e.g., Bott v. Four Star*, 807 F.2d at 1572. As stated above, willfulness necessarily involves allegations that the accused infringer may prefer the jury not to hear. The Supreme Court has described willful infringement as conduct that is “willful, wanton, malicious, bad-faith, deliberate, consciously wrongful, flagrant or – indeed – characteristic of a pirate.” *See Halo*, 579 U.S. at 103-04. Evidence of copying falls well within this panoply of behavior. *Bott v. Four Star*, 807 F.2d at 1572. Moreover, as the evidence relates to Google’s own conduct, it only has itself to blame that Singular now wishes to present such evidence to the jury. *See Vereen v. City of New Haven*, No. 3:17-cv-1509, 2018 WL 6069098, at *6 (D. Conn. Nov. 20, 2018) (“The Court cannot conceive of how Plaintiff could be unfairly prejudiced by the introduction of evidence about Plaintiff’s own conduct”). As to Google’s argument regarding jury confusion, this Court will no doubt appropriately instruct the jury on willfulness as it has in previous cases, therefore, “any prejudice may be cured by an appropriately crafted jury instruction.” *Leniart v. Bundy*, No. 3:11CV00679, 2015 WL 6509114, at *8 (D. Conn. Oct. 28, 2015).

claim “low precision arithmetic.” They include numerous very specific limitations that, as a whole, the Patent Office upheld as patentable.

II. GOOGLE'S MOTION IN LIMINE NO. 2

Google argues that Singular should not be permitted to use terms such as “stealing,” “theft,” “copying,” “misappropriating,” “pirating,” “trespassing,” or any similar terms. Google MIL No. 2 at 7. An outright pre-trial exclusion of such terms cannot possibly be justified. In *Halo*, the Supreme Court itself used such terms in the context of willful infringement. *See Halo Elecs., Inc. v. Pulse Elecs., Inc.*, 579 U.S. 93, 103-04 (2016) (conduct that is “willful, wanton, malicious, bad-faith, deliberate, consciously wrongful, flagrant or – indeed – characteristic of a pirate); *see also id.* at 104 (willfulness is akin to “steal[ing] the patentee’s business”); *id.* at 106 (Section 284 allows district courts to “punish the full range of culpable behavior”). This Court recognized such conduct as evidence of willfulness in the *SiOnyx* case. *See SiOnyx, LLC v. Hamamatsu Photonics K.K.*, 330 F. Supp. 3d 574, 608 (D. Mass. 2018). Accordingly, the better course of action is to deny the MIL and wait until trial and rule on any objections in context at that time.

Google argues that claims of misappropriation and copying are not relevant to proving willful infringement. Google MIL No. 2 at 7-8. Google is wrong. As stated in Singular’s response to Google MIL No. 1, willfulness is determined in light of the totality of the circumstances. *See, e.g., See, e.g., Knorr-Bremse Systeme Fuer Nutzfahrzeuge GmbH v. Dana Corp.*, 383 F.3d 1337, 1342 (Fed. Cir. 2004). According to the Federal Circuit, this evidence includes “whether the infringer deliberately copied the ideas or design of another.” *Bott v. Four Star Corp.*, 807 F.2d 1567, 1572 (Fed. Cir. 1986). Google attempts to circumvent this controlling law by arguing that “whether infringement was willful turns on what the accused infringer *knew*, not what they *did*.” Google MIL No. 2 at 8 (emphasis by Google). That is a semantic argument that should be rejected as contrary to law. In any event, as set forth in the

response to Google MIL No. 1 above, the evidence shows that Google knew that it was copying Singular's invention. This evidence includes the numerous presentations Dr. Bates made to Google engineers detailing the technical features of the invention; his numerous notices therein that his invention was patent-protected; and Google's willful blindness to such notices.

Google's argument that "any willfulness argument should be focused solely on whether Google was aware of the asserted patents and knew that its design of the TPU infringed those patents" (Google MIL No. 2 at 7-8) should be rejected as legally incorrect for two reasons. First, as set forth in the response to Google MIL No. 1, conduct occurring prior to issuance of an asserted patent may be considered in determining willful infringement. *See, e.g., Minnesota Min. & Mfg. Co. v. Johnson & Johnson Orthopaedics, Inc.*, 976 F.2d 1559, 1581 (Fed. Cir. 1992) ("pre-patent conduct may also be used to support a finding of willfulness"); *see also Kaufman Co. v. Lantech, Inc.*, 807 F.2d 970, 978-79 (Fed. Cir. 1986). Thus, a patentee "can rely on evidence of conduct from prior to [the date of issuance] to show what [the defendant's] state of mind would have been [at the time of issuance] or later." *Pelican Int'l v. Hobie Cat*, 2023 WL 2127994, at *17 (S.D. Cal. Feb. 10, 2023). Second, Google's willful blindness to Singular's patent rights is evidence of willfulness. *See, e.g., Global-Tech v. SEB*, 563 U.S. at 754, 769 (2001). Thus, Google cannot escape willfulness by arguing that it was not aware of Singular's patents and, therefore, did not know it was infringing.

Google argues that Singular's allegations of willfulness are not relevant to copying as a secondary consideration of nonobviousness. Google MIL No. 2 at 9-10. According to Google, the technical information that Dr. Bates provided to Google "principally described broad ideas about approximate computing or LPHDR execution units." *Id.* at 9. The jury can determine that Google is incorrect because the presentations disclosed the details of Dr. Bates' invention, not

“broad ideas. For example, as Google’s Dr. Jeff Dean admitted, the following “key ideas” of Dr. Bates’ invention, that Dr. Dean recognized would provide “massive speedups,” were disclosed to Google:



See Ex. J. This specific technical information is not merely a “broad idea.” Such documents are evidence of copying that is relevant to the objective indicia of non-obviousness. *See, e.g., Liqwd, Inc. v. L’Oreal USA, Inc.*, 941 F3d 1133, 1137 (Fed. Cir. 2019).⁶

Finally, Google argues that evidence characterizing Google’s conduct as copying etc. would be highly prejudicial and likely to confuse the jury. Google MIL No. 2 at 10-11. This argument should be rejected. “[V]irtually all evidence is prejudicial.” *Davignon v. Hodgson*, 524 F.3d 91, 113 (1st Cir. 2008). Under Google’s theory, evidence of copying etc. would never be admissible to prove willfulness because it is always highly prejudicial. But that is not the law. Under controlling Federal Circuit law, “whether the infringer deliberately copied the ideas or design of another” is a factor relevant to the issue of willfulness. *See, e.g., Bott v. Four Star*, 807 F.2d at 1572. As stated above, willfulness necessarily involves allegations that the accused infringer may prefer the jury not to hear. The Supreme Court has described willful infringement

⁶ Google argues that, during IPR, the Patent Office stated that “low-precision arithmetic” was not novel. Google MIL No. 2 at 9-10. That is irrelevant because the asserted claims do not broadly claim “low precision arithmetic.” They include numerous very specific limitations that, as a whole, the Patent Office upheld as patentable.

as conduct that is “willful, wanton, malicious, bad-faith, deliberate, consciously wrongful, flagrant or – indeed – characteristic of a pirate. *See Halo*, 579 U.S. at 103-04. Evidence of copying falls well within this panoply of behavior. *Bott v. Four Star*, 807 F.2d at 1572. Moreover, as the evidence relates to Google’s own conduct, it only has itself to blame that Singular now wishes to present such evidence to the jury. *See Vereen v. City of New Haven*, No. 3:17-cv-1509, 2018 WL 6069098, at *6 (D. Conn. Nov. 20, 2018) (“The Court cannot conceive of how Plaintiff could be unfairly prejudiced by the introduction of evidence about Plaintiff’s own conduct”). As to Google’s argument regarding jury confusion, this Court will no doubt appropriately instruct the jury on willfulness as it has in previous cases. Moreover, “any prejudice may be cured by an appropriately crafted jury instruction.” *Leniart v. Bundy*, No. 3:11CV00679, 2015 WL 6509114, at *8 (D. Conn. Oct. 28, 2015).

III. GOOGLE’S MOTION IN LIMINE NO. 3

Google’s MIL No. 3 seeks to exclude all testimony relating to willfulness and several objective indicia of non-obviousness because such testimony inherently relates to “the subjective state of mind (e.g. knowledge or intent) of Google or its employees.” Google MIL No. 2 at 11-12. Google’s argument that all evidence relating to “knowledge or intent” should be categorically excluded would effectively nullify the governing caselaw of willfulness and objective indicia of non-obviousness, and its motion should therefore be denied.

“[T]he concept of ‘willfulness’ requires a jury to find ... deliberate or intentional infringement.” *Eko Brands, LLC v. Adrian Rivera Maynez Enterprises, Inc.*, 946 F.3d 1367, 1378 (Fed. Cir. 2020) (*citing Halo Elecs., Inc. v. Pulse Elecs., Inc.*, 579 U.S. 93, 105 (2016)) (emphasis added). Willfulness is a question of fact for the jury. *WBIP, LLC v. Kohler Co.*, 829 F.3d 1317, 1340-41 (Fed. Cir. 2016).

Under this standard, any evidence supporting willfulness must, by definition, relate to Google's knowledge and intentions. Google cannot sidestep the issue of willfulness by simply declaring such evidence off-limits.

In particular, Google seeks to dismiss the opinions of Dr. Khatri and Mr. Green relating to the issue of willfulness as "subjective" speculation about Google's "state of mind," but these opinions are neither subjective nor speculative. All of Dr. Khatri's opinions relating to the rationale underlying Google's decision to use LPHDR units are clearly supported by direct quotes from Google documents and communications. *See, e.g.*, Ex. K, ¶¶ 111-124. For example, if Dr. Khatri reads an internal Google communication in which an engineer describes himself as "nervous", Dr. Khatri may fairly conclude that the engineer was nervous. Similarly, the opinions of Mr. Green that deal with willfulness are based not on speculation, but on Google's own documents and the deposition testimony of its witnesses. *See, e.g.*, Ex. L, pp. 27-34, 91-92 and 108.

Further, several objective indicia of non-obviousness involve states of mind, including skepticism, praise, long-felt need, unexpected results, and copying. *See generally WBIP*, 829 F.3d 1317; *see also Ruiz v. A.B. Chance Co.*, 234 F.3d 654, 662-63 (Fed. Cir. 2000). Google's motion would effectively void these objective indicia by preventing Singular's experts from offering testimony about them.

For the reasons given above, Google's third motion *in limine* should be denied.

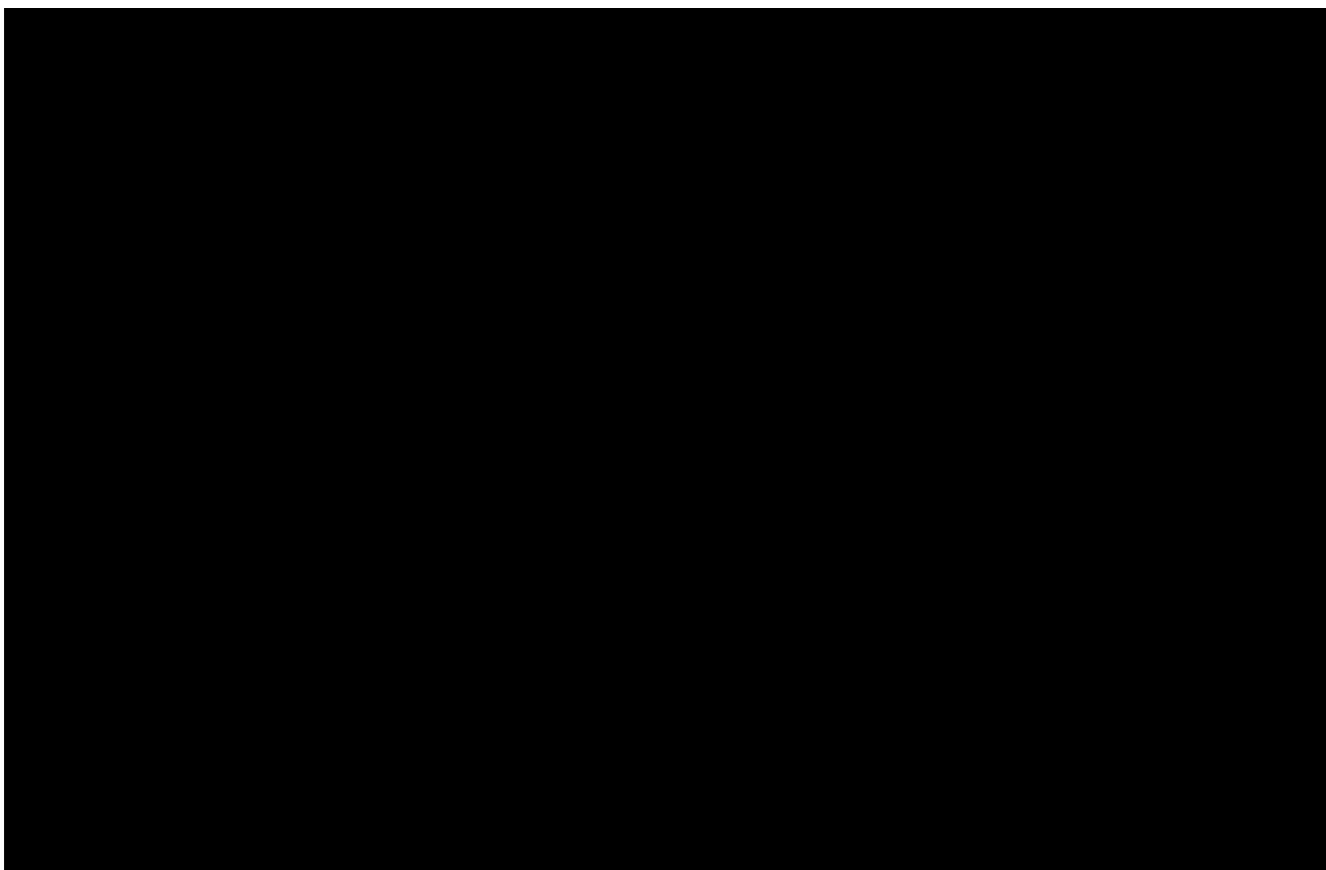
IV. GOOGLE'S MOTION *IN LIMINE* NO. 4

Google's MIL No. 4 seeks to preclude Singular from introducing evidence that a privileged communication occurred. Google MIL No. 4 at 16. Google fails to distinguish between the fact that Google consulted with counsel, which is not protected from disclosure by

the attorney-client privilege, and the substance of such communication, which is privileged. This distinction is crucial and dispositive. Singular intends to introduce evidence that Google consulted with counsel at various points during their 7-year relationship. This information is highly relevant to Singular’s claim for willful infringement 1) as it relates to Google’s subjective state of mind at the time of infringement and 2) whether Google was “willfully blind” to Singular’s patent rights.

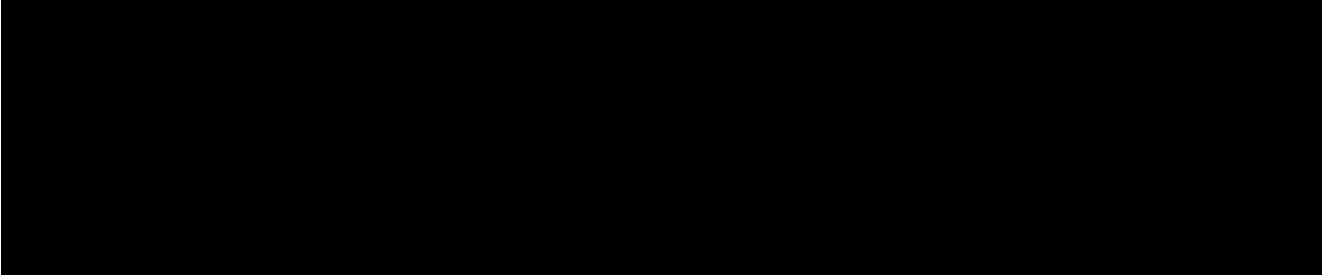
A. Background

1. Singular’s 2013 Presentation to Google



⁷ Singular’s interactions with Google are discussed above in Singular’s Opposition to Google’s MIL No. 1.

2. Singular's 2017 Presentation to Google



"Catherine Tornabene, became aware of the '273 and '156 patents as of at least February 17, 2017"

Ex. Q. This admission is what caused Singular to press Ms. Tornabene at her deposition regarding this interaction:

Q. All right. So as IP counsel, you were aware of these two patents, the '273 and '156 patents, as of at least by February 17th, 2017; correct?

A. Yes.

Ex. R at 11:15-18.⁸

Following Ms. Tornabene's review of Singular's patents, Google launched the Accused Products in March 2017.

B. ARGUMENT

1. Singular May Introduce Evidence of the Fact Communications with Attorneys Occurred Without Implicating Privilege

It is well-established that the attorney-client privilege only protects the content of communications. *See In re Grand Jury Proceedings (Twist)*, 689 F.2d 1351, 1352 (11th Cir. 1982). It does not shield the fact that an attorney-client communication took place or peripheral facts such as the date of a privileged communication or the identity of persons involved in the

⁸ Google included references to deposition testimony some of which was not designated by Singular. In any event, Google requested that Singular reduce its deposition designations. Singular is in the process of doing so and most, if not all, of the deposition testimony Google objected to as requesting privileged information has been removed.

communication (e.g., authors and recipients of privileged documents, persons present at a privileged meeting). *See Upjohn Co. v. United States*, 449 U.S. 383, 395 (1981) (“The privilege only protects disclosure of communications; it does not protect disclosure of the underlying facts by those who communicated with the attorney”); *J.P. Foley & Co. v. Vanderbilt*, 65 F.R.D. 523, 526 (S.D.N.Y. 1974) (“the privilege pertains solely to the substance of communications” and “does not preclude inquiry into the subject matter of communications”); Fed. R. Civ. P. 26(b)(5).

Singular should be permitted to elicit non-privileged testimony from a witness about the fact an attorney-client communication occurred and the date of that communication. The fact that Google communicated with their attorneys is not privileged. Google’s conduct and state of mind over the course of its entire relationship with Singular should be assessed when determining whether Google willfully infringed the Asserted Patents. *See, e.g., Knorr-Bremse Sys. fur Nutzfahrzeuge GmbH v. Dana Corp.*, 383 F.3d 1337, 1342 (Fed. Cir. 2004) (requiring willful infringement to be assessed from viewing the totality of the circumstances). Under *Halo*, Google’s subjective state of mind is central to the willfulness inquiry. *Halo Elecs., Inc. v. Pulse Elecs., Inc.*, 579 U.S. 93, 105 (2016).⁹ The Court should therefore allow Singular to introduce

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

This evidence is directly relevant to whether Google was willfully blind to Singular’s patent rights. *See Global-Tech*

⁹ The standard for willful infringement is discussed more fully in Singular’s response to Google MIL No. 1.

Appliances, Inc. v. SEB S.A., 563 U.S. 754, 131 (2011) (explaining first prong of proving willful blindness requires proof of subjective belief that there is a high probability that a fact exists).¹⁰ This testimony is relevant and highly probative of Google’s state of mind and any adverse inference drawn therefrom, is not outweighed by such relevance. *See Knox Energy, LLC v. Gasco Drilling, Inc.*, No. 1:12CV00046, 2014 WL 4546049, at *3 (W.D. Va. Sept. 12, 2014) (denying motion to exclude factual information regarding communications with counsel as it was highly relevant to defendant’s state of mind).¹¹

Accordingly, Singular respectfully requests this Court deny Google’s motion to preclude evidence that a privileged communication occurred.¹²

¹⁰ This decision addressed the knowledge requirement under 35 U.S.C. §271(b). Courts have extended this rationale recognizing that facts supporting willful blindness can satisfy the knowledge requirement for willful infringement. *See Corephotronics, Ltd. v. Apple, Inc.*, No. 17-CV-06457-LHK, 2018 WL 4772340, at *9 (N.D. Cal. Oct. 1, 2018); *see also Ansell Healthcare Prod. LLC v. Reckitt Benckiser LLC*, No. 15-CV-915-RGA, 2018 WL 620968, at *6 (D. Del. Jan. 30, 2018) (recognizing “it is likely that willful blindness could apply in willful infringement cases”); *Motiva Pats., LLC v. Sony Corp.*, 408 F. Supp. 3d 819, 837 (E.D. Tex. 2019) (“Since the Supreme Court has explained that willful blindness is a substitute for actual knowledge in the context of infringement, it follows that willful blindness is also a substitute for actual knowledge with respect to willful infringement.”).

¹¹ Notably, this court declined to follow the reasoning from *Sharer v. Tandberg, Inc.*, No. 1:06CV626 (JCC), 2007 WL 983849, at *1 (E.D. Va. Mar. 27, 2007), which is cited by Google. Mot. at p.18. In *Sharer*, the court found that the fact that defendant communicated with counsel was only relevant to the extent that an inference may be drawn as to the substance of legal communications between attorney and client. Here, the fact that Google consulted with its attorneys is relevant to the totality of circumstances in determining whether their infringement was willful and more specifically, to their specific intent at the time the Accused Products were launched.

¹² Defendants analogize the facts to *McKesson Info. Sols., Inc. v. Bridge Med., Inc.*, 434 F. Supp. 2d 810, 812 (E.D. Cal. 2006) which concerned a defendant who received an opinion of counsel but refused to reveal it under a claim of privilege. Such facts are not present here.

V. GOOGLE'S MOTION IN LIMINE NO. 5

A. Introduction.

Google's MIL number 5 asks this Court to preclude evidence and argument of Google's use of the accused TPUs in its products and services as well as the incremental revenues derived from that use. Section 284 of the patent damages statute requires that Singular be compensated with no less than a reasonable royalty "*for the use made of the invention*" by Google. 35 U.S.C. § 284. Google asks the Court to read this requirement out of the statute by excluding evidence or argument of "Google's services or products that use the allegedly infringing TPUs." Google MIL No. 5 at 19. Google's use of the infringing products to power its applications is the focus of Section 284, yet Google wants to exclude even the mention of it, largely because the products are widely used and drive profits to Google. Google also asks the Court to exclude the opinions of Singular's damages expert, Phil Green, on the incremental revenues Google derived from the use of the accused products. Not surprisingly, those benefits to Google are part of Mr. Green's reasonable royalty opinion using the long-established *Georgia-Pacific* factors.¹³ Mr. Green also analyzes the incremental revenues Google has obtained by deploying the accused TPUs to inform the parties positions at the hypothetical negotiation. These opinions are based on Google's own documents and tied to the unique facts of this case. Google's Motion in Limine No. 5 should be denied in its entirety.

B. Google's Widespread Use of the Accused Products is the Measure of Damages.

Google decided to develop and deploy the accused products to meet the ever growing need to power its machine learning capabilities, calling its predicament a [REDACTED]

¹³The "Georgia-Pacific factors" refer to the fifteen factors used to determine a reasonable royalty from the case of the same name. *Georgia-Pacific Corp. v. U.S. Plywood Corp.*, 318 F. Supp. 1116 (S.D.N.Y. 1970).

[REDACTED] Ex. S; Ex.

T at 2 [REDACTED]

[REDACTED]
[REDACTED]

Google's widespread use of the infringing technology demonstrates the depth of that need as Google uses the accused TPU chips to power its most popular and lucrative products and services. Indeed, in response to Singular's interrogatory asking Google to identify the products and services that "make use of the Accused Products," Google identified 17, including its widely used and highly profitable [REDACTED] Ex. Q at 7-8; See, generally, Ex. U (describing the use of TPUs by [REDACTED])

[REDACTED]

Despite recognizing this tie between the accused products and the use made by these 17 products and services, Google argues that any evidence or argument of this use should be precluded because it is irrelevant to damages. Google MIL No. 5 at 23. That is facially incorrect as Google admits these products and services use the accused technology, making them directly relevant to the black letter of the patent damages statute. 35 U.S.C. § 284 (reasonable royalty is to compensate Singular for Google's "use made of the invention"); *Virnetx, Inc. v. Cisco Sys., Inc.*, 767 F.3d 1308, 1326 (Fed. Cir. 2014). While Mr. Green, relies on the cost savings Google enjoyed by building the infringing TPUs as opposed to buying the next best non-infringing alternative, that does not make the fact that [REDACTED]

[REDACTED] irrelevant. Indeed, Mr. Green references this use in his opinion on damages in two ways. First, as explained more fully below, Mr. Green offers an opinion on damages based on [REDACTED]

[REDACTED] Ex. L at pp. 82-83. Second, Mr. Green examines how these products and services benefit from the accused products in his analysis of the *Georgia-Pacific* factors. *Georgia-Pacific* factor number six examines the effect using [REDACTED]

[REDACTED]. Starting with Google's identification of the services and products that utilize the infringing technology, Mr. Green describes how this use aids [REDACTED]
[REDACTED]

[REDACTED] Ex. L at 92-93. Mr. Green also opines on the importance of these 17 products and services to Google under Georgia Pacific Factor number 11, which requires an analysis of the extent to which Google "has made use of the invention." Ex. L at 96-100. As part of his analysis of this factor in this case, Mr. Green examines the [REDACTED]

[REDACTED]
[REDACTED] *Id.* at 99-100.

Google also argues that the Court should exclude evidence and argument about Google's use of the infringing technology under Rule 403 because that evidence would "unfairly prejudice Google, confuse the jury, and waste time." Google MIL No. 5 at 24. But the mere fact that the evidence will damage Google's case is not enough, indeed, "[v]irtually all evidence is meant to be prejudicial, and Rule 403 only guards against unfair prejudice.'" *In re PHC, Inc. Shareholder Litigation*, 894 F.3d 419, 440 (1st Cir. 2018), quoting *United States v. Sabean*, 885 F.3d 27, 38 (1st Cir. 2018); see also, *United States v. Hammoud*, 381 F.3d 316, 341 (4th Cir. 2004) (en banc). (the evidence must be unfairly prejudicial, and the "unfair prejudice must substantially outweigh the probative value of the evidence.") (emphasis in original). Here, the probative value is plain, it goes directly to Google's use of the infringing technology. That Google chose to use the

infringing technology across its best-known products and services is not a reason to exclude such evidence. That is not prejudice. To the contrary, it's precisely what makes it relevant.

C. Mr. Green utilizes Google revenues as an alternative damages methodology and as part of his *Georgia-Pacific* analysis.

In addition to arguing that Singular should be precluded from introducing evidence of Google's use of the infringing technology, Google asks the Court to prevent Singular from introducing evidence or argument on the revenues derived from those products that use the infringing TPUs because they "are irrelevant to Mr. Green's damages conclusion." Google MIL No. 5 at 19. That is incorrect. Mr. Green's report includes an independent opinion on damages based on [REDACTED]

[REDACTED]
First, contrary to Google's argument that Mr. Green *only* offers an opinion based on Google's cost savings, Mr. Green opines that in addition to considering cost savings from use of the Patents-In-Suit, at the time of the hypothetical negotiation, "the parties would have considered potential profits that Google could earn from the use of the patented technology." Ex. L. at 82. Mr. Green bases his opinion on well-established Federal Circuit law that allows for the consideration of incremental profits in examining the hypothetical negotiation. *Aqua-Shield v. Inter Pool Cover Team*, 774 F.3d 766, 772 (Fed. Cir. 2014). Mr. Green took the information available to him [REDACTED] and determined that, at the time of the hypothetical negotiation, the parties would have considered the fact that Google would [REDACTED]

[REDACTED] Ex. L at 83. In the face of this opinion, Google attempts to also exclude this evidence because Google argues that Mr. Green "does not provide sufficient information about Google's products revenues to offer any proper analysis as to damages based on those figures." Google MIL No. 5 at 21. But Mr. Green

does quantify Google's incremental revenues with the limited information he was provided.

Specifically, Mr. Green calculated the [REDACTED]

[REDACTED] Ex. L at 83. Mr. Green

examined another Google document that showed the [REDACTED]

[REDACTED]. *Id.* Mr. Green should be allowed to testify about this excess revenue attributable to the accused products and based on documents produced by Google in this case. *Uniloc USA, Inc. v. Microsoft Corp.*, 632 F.3d 1292, 1318 (Fed. Cir. 2011) (“evidence purporting to apply [the *Georgia-Pacific* factors], and any other factors, must be tied to the relevant facts and circumstances of the particular case at issue and the hypothetical negotiations that would have taken place in light of those fact and circumstances at the relevant time.”).

Second, as explained above, [REDACTED]

[REDACTED] are part of Mr. Green's analysis under *Georgia Pacific* Factor 11. Ex. L at 99-100. Again, Mr. Green's opinion properly evaluates the incremental revenues attained by Google by using the accused products within the well-established *Georgia Pacific* framework.

Google also tries to attack Mr. Green's opinion because Mr. Green cannot determine the exact incremental revenue because Google did not provide documents quantifying the revenue. Google MIL No. 5 at 21. Google admits that it does not have the data, and did not produce it, or else it would have been in violation of Magistrate Judge Cabell's Order that Google produce such data. Google MIL No. 5 at 21-22. Google's conclusion, however, that Mr. Green should not be allowed to testify on the data Google did produce is backwards. Mr. Green is entitled to rely on the evidence that was actually available and Google should not be allowed to argue that its

failure to produce information should lead to portions of Mr. Green's opinion being excluded because determining whether the facts Mr. Green relies on are sufficient to support his opinion are questions for the jury. *i4i Ltd. Partnership v. Microsoft Corp.*, 598 F.3d 831, 855-56 (Fed. Cir. 2010) ("Questions about what facts are most relevant or reliable to calculating a reasonable royalty are for the jury. The jury was entitled to hear the expert testimony and decide for itself what to accept or reject.").

Finally, Google notes that Mr. Green's report contains references to Google's total revenues as opposed to its incremental revenues tied to the accused products. Google MIL No. 5 at 19. Singular agrees that Mr. Green will not testify or offer evidence regarding these total revenue figures, specifically those referenced on page 26 of his report where Mr. Green provides background on Google as a company. Ex. L at 26. For the reasons set forth above, Singular does not agree, however, that Mr. Green's incremental revenue opinions are improper. Contrary to Google's mischaracterization that they are "offhand" (Google MIL No. 5 at 19), they are tied to the technology at issue in this case and are based on Google's own documents produced in this case. Ex. L at 82-83, 92-93, 99-100.

VI. GOOGLE'S MOTION IN LIMINE NO. 6

Google's MIL No. 6 should be denied because the wealth, income, and compensation of executives who led the infringement tends to show they had a motive to infringe, which is relevant to willfullness.

In attempting to prove that Google acted knowingly or recklessly when it infringed Singular's patent, Singular may introduce evidence showing that the persons who developed the Accused Products had a motive to infringe. The compensation and wealth of the Google executives who led the infringing conduct is probative of that motivation.

Contrary to Google’s argument in its motion, the income, compensation, and wealth of executives is not categorically excluded from evidence. Rather, “[w]hether evidence of wealth is properly admissible depends on the specific facts of the case.” *United States v. Hope*, 608 F. App’x 831, 838 (11th Cir. 2015). Such evidence is admissible when it is “relevant to the issues in the case,” and not a mere effort to “to appeal to class bias. . . .” *Id.* The court has “broad discretion” to admit so-called “‘wealth evidence’ so long as it aid[s] in proving or disproving a fact in issue.” *United States v. Bradley*, 644 F.3d 1213, 1272 (11th Cir. 2011).

Here, the evidence of the compensation, income, and wealth of the lead infringers of the patent is relevant to their motive to infringe, and therefore probative of the willfulness of Google’s infringement. *See Hope*, 608 F. App’x at 839 (evidence of lavish lifestyle relevant to motive in fraud case); *Bradley*, 644 F.3d at 1272 (evidence of wealth relevant in fraud case). Dr. Dean and the other lead infringers set out to solve a serious problem at Google: its ability to scale its services without investing tremendous sums in computer servers and energy. Dr. Dean could reasonably expect Google to richly reward him for providing a solution to that problem at low cost to Google. The prospect of such wealth would help explain why Dr. Dean and other executives would knowingly infringe, heedless of the likelihood their products would violate Singular’s rights in its patent.

Nor is evidence of wealth or compensation more prejudicial than probative. Google is so ubiquitous that its name became a verb 20 years ago.¹⁴ Its parent company, Alphabet, is the

¹⁴ See Wikipedia.com, “Google (verb)”: “Owing to the dominance of the Google search engine, to google has become a transitive verb. The neologism commonly refers to searching for information on the World Wide Web, typically using the Google search engine. The American Dialect Society chose it as the ‘most useful word of 2002.’ It was added to the Oxford English Dictionary on June 15, 2006, and to the eleventh edition of the Merriam-Webster Collegiate Dictionary in July 2006.”

fourth-largest company by market capitalization in the world.¹⁵ A reasonable jury would suspect, long before any evidence of wealth or compensation is introduced, that Dr. Dean and other Google executives are “financially well-off.” *Bradley*, 644 F.3d at 1272. As such, “the evidence [is] relevant and the prejudice slight,” so it should not be excluded under Fed.R.Evid. 403.

VII. GOOGLE’S MOTION IN LIMINE NO. 7

Singular agrees not to present evidence or argument regarding Google’s corporate acquisitions. However if Google opens the door to such evidence or argument, Singular reserves the right to use such evidence or argument in rebuttal.

VIII. GOOGLE’S MOTION IN LIMINE NO. 8

In its eighth motion *in limine*, Google seeks to exclude the Court’s own Claim Construction Order on the grounds that it is “irrelevant.” Google’s argument is unsupported by law. Indeed, it is fundamentally inconsistent with the seminal principle that the “construction of a patent, including terms of art within its claim, is exclusively within the province of the court.” *Markman v. Westview Instruments, Inc.*, 517 U.S. 370, 372 (1996). Accordingly, the Court should deny Google’s request.

A court’s claim construction is the “law of the case” for purposes of trial. *Andersen Corp. v. Fiber Composites, LLC*, 474 F.3d 1361, 1371 n.2 (Fed. Cir. 2007). “No party may contradict the court’s construction to a jury.” *Exergen Corp. v. Wal-Mart Stores, Inc.*, 575 F.3d 1312, 1321 (Fed. Cir. 2009) (“Once a district court has construed the relevant claim terms, and unless altered by the district court, then that legal determination governs for purposes of trial.”)

Google attempts to draw a distinction between the “claim constructions themselves” and the rest of the Court’s “reasoning” in its Claim Construction Order, arguing that the latter is

¹⁵ <https://www.cbsnews.com/news/fortune-500-list-biggest-companies-walmart-amazon-apple/>

superfluous and “irrelevant.” But a Court’s “express constructions” cannot logically be separated from the reasoning behind them. The language of the constructions themselves, together with the accompanying explanation in the Court’s *Markman* order, define the meaning and scope of the disputed claim terms. *See Banhazl v. Am. Ceramic Soc'y*, Civil Action No. 16-cv-10791-ADB (D. Mass. Mar. 5, 2021) at *7 (prohibiting argument that “contradicts the Court’s constructions or the expressed reasoning that led to those constructions”); *see also id.* at *4 (excluding expert testimony that “contradicts the language or reasoning behind a court’s claim construction order”) (emphasis added). Thus, excluding the reasoning behind the Court’s constructions, leaving only the bare language of the constructions themselves, would rob them of necessary context.

The Court’s recent order clarifying the scope of the term “execution unit” serves as a perfect illustration of this principle. *See Dkt. 633*. In this order, the Court explained that its prior construction of “execution unit” does not exclude execution units that are “overlapping with another because of shared components.” *Id.*, p. 5. “For example, if Execution Unit 1 consists of circuits A and B, and Execution Unit 2 is composed of circuits A and C, there are two tangible units, not one as Google suggests.” *Id.* Without altering the language of its prior construction, the Court’s reasoning provided context about the proper scope of the term “execution unit” that was necessary to resolve a dispute between the parties.

Google now argues that this reasoning “would only confuse the jury.” Google MIL No. 8 at. 30. But as illustrated by the example above, the reasoning in the Court’s Claim Construction Order (and subsequent Orders relating to claim construction, such as Dkt. 633) serves to inform and clarify the constructions themselves. Rather than excluding the Court’s reasoning about claim construction, the Court should instead prevent the parties from offering argument or

testimony that is inconsistent with its Claim Construction Orders. *See Liquid Dynamics Corp. v. Vaughan Co.*, 449 F.3d 1209, 1224 n.2 (Fed. Cir. 2006) (“expert opinion evidence” that is “based on an impermissible claim construction” could “prejudice and confuse the jury”).¹⁶

For the reasons given above, Google’s eighth motion *in limine* should be denied.

IX. GOOGLE’S MOTION IN LIMINE NO. 9

Google’s MIL No. 9 purportedly seeks to preclude Singular from presenting any evidence or argument at trial showing that Dr. Bates “invented LPHDR execution units” (Google’s “First Preclusion Request”), and also seeks to preclude evidence or argument showing that “Dr. Bates was the first to understand the benefits of LPHDR execution units” (Google’s “Second Preclusion Request”). Google MIL No. 9 at p. 30. Google alleges that such evidence risks confusing the jury at trial. *Id.* Both of Google’s requests are based on flawed legal and factual premises, as explained in detail below, and both should be denied.

Google justifies these requests by insinuating that Dr. Khatri plans to present testimony claiming that Dr. Bates invented LPHDR execution units and was the first to recognize their benefit. However, Google does not cite a single passage of Dr. Khatri’s reports that supports this allegation. Instead, the passages of Dr. Khatri’s report cited in Google’s motion, and that Google asks the Court to exclude, relate generally to LPHDR execution units and their benefits and do not state, or even imply, that these things are coextensive with “the invention.” Indeed, Dr. Khatri explains very clearly that “the inventions” at issue correspond to all of the limitations of each Asserted Claim as a collective whole. *See, e.g.*, Ex. K ¶¶ 87-88.

¹⁶ Singular did not file a motion *in limine* to exclude testimony that contradicts the Court’s claim construction because such testimony is already prohibited, and thus the issue “would more appropriately be addressed through a contemporaneous objection at trial rather than through preclusion of certain arguments or testimony.” *Carucel Investments, L.P. v. Novatel Wireless, Inc.*, Case No. 16-cv-118-H-KSC (S.D. Cal 2017); *see also* *Banhazl* at *7.

While Google frames its motion as a request to exclude specific claims, it is in fact seeking to broadly exclude any argument or evidence that relates to LPHDR execution units, parallelism, or the benefits of each. Precluding Singular from presenting “any evidence or argument” about any one claim element or the benefits of the claimed system will prevent Singular from describing its invention *as a whole* and its unexpected benefits. Because such evidence is relevant to the key questions of infringement, willfulness, validity, and damages, excluding it would be unfairly prejudicial to Singular. Accordingly, Google’s motion should be denied.

A. Google’s First Preclusion Request Should Be Denied

In its First Preclusion Request, Google insinuates that “Singular may attempt to elicit [] testimony” from Dr. Bates or Dr. Khatri showing that “Dr. Bates invented LPHDR execution units,” citing several paragraphs of Dr. Khatri’s opening and rebuttal expert reports. Google MIL No. 9 at p. 31.

However, none of the paragraphs Google cites say anything that claims, or even suggests, that “Dr. Bates invented LPHDR execution units.” For example, Google states: “Dr. Khatri’s rebuttal report credits as novel ‘the inclusion, within computer processors, of processing elements designed to perform … (LPHDR) arithmetic operations.’” Google MIL No. 9 at p. 31 (quoting Khatri Rebuttal Rpt., ¶ 267). However, what Dr. Khatri actually identified as novel is “[t]he structure of the claimed inventions” Ex. G, ¶ 267. This paragraph of Dr. Khatri’s report goes on to identify the inclusion of LPHDR processing units in a processor as *one feature* of the claimed invention. *See id.* Likewise, in none of the other paragraphs of the Khatri report cited in Google’s motion – or anywhere else in Dr. Khatri’s report – does Dr. Khatri state that Dr. Bates invented an LPHDR execution unit.

Instead, the parts of the Khatri report cited in Google’s motion – and that Google is asking the Court to exclude – relate generally to LPHDR execution units and their benefits. Thus, while Google’s motion pretends to request a narrow exclusion, it actually seeks to exclude a broad and undefined category of arguments and evidence that generally relate to LPHDR execution units. This includes not only the parts of the Khatri report directly cited by Google in its motion, but presumably also includes additional expert testimony that merely mentions LPHDR execution units, and arguments based on this testimony. Google’s First Preclusion Request should be denied because it is overbroad and because its boundaries are not well defined.

The First Preclusion Request should also be denied because it is inconsistent with the governing law. In the IPRs, the PTAB expressly confirmed the validity of the Asserted Claims. Google has not cited a single case in which a PTAB decision was used to justify eliminating or minimizing *one element* of a valid claim, nor has it identified a case in which the concept of novelty or patentability was applied to individual claim limitations, rather than to the claim as a whole.

For the foregoing reasons, Google’s First Preclusion Request should be denied.

B. Google’s Second Preclusion Request Should Be Denied

Google states that Singular should be precluded from “arguing that [Dr. Bates] was the ‘first’ to recognize the benefits of operations utilizing [LPHDR] units in any specific context, such as parallel processing” because “[a]llowing such evidence or argument would create confusion and create the risk that the jury would improperly credit Dr. Bates with invention of the LPHDR execution unit.” Google MIL No. 9 at 32. These allegations are false.

First, Google’s demand to preclude Singular from attributing to Dr. Bates the benefits of utilizing LPHDR units is based on its assertion that “Dr. Bates was *indisputably not* the first

individual to recognize the benefits of reduced precision floating point arithmetic in terms of parallel processing.” Google MIL No. 9 at p. 33 (emphasis original in part and added in part). But, as explained below, Google’s assertion that Dr. Bates was not the first to recognize the benefits of reduced precision floating point arithmetic in terms of computer architectures that support massively parallel processing is based entirely on attorney argument and contradicts opinions that are clearly expressed in Dr Khatri’s report. In other words, Google’s assertion *is* disputed, and Google’s Second Preclusion Request should be denied on this basis alone.

More specifically, in support of its assertion, Google quotes Dr. Pavle Belanovic’s May 2002 master’s thesis as stating that “[m]inimizing bitwidths of signals carrying [certain] values makes more parallel implementations possible and reduces power dissipation of the circuit.” *Id.* at 32-33. Google alleges that this statement from Dr. Belanovic’s thesis “directly refutes Dr. Khatri’s opinion.” *Id.* Google also refers to Dr. Leeser’s alleged statements that “employing a ‘narrower bitwidth’ would allow for use of ‘fewer hardware resources’ and ‘more parallelism,’” and claims that “Dr. Khatri makes no effort to address” Dr. Belanovic’s or Dr. Leeser’s statements. *Id.* at 33. Google’s arguments are flawed, as discussed below.

The quoted statements of Dr. Belanovic and Dr. Leeser, however, make no mention of reduced-precision arithmetic – indeed, they do not mention arithmetic at all. This is important, as the use of reduced-precision arithmetic with high dynamic range, which allows for massive parallelism while still producing acceptable results, is a key distinction between the inventions of the Asserted Claims and the prior art. Further, Dr. Khatri’s report explains that Dr. Belanovic’s thesis does not disclose a “‘low-precision’ execution unit.” Ex. G, ¶¶ 59-62. Thus, the supposedly “undisputed facts” that Google relies on to justify its Second Preclusion Request are not undisputed at all.

The jury is entitled to hear evidence relating to this factual dispute in rendering a verdict.

Micro Chemical, Inc. v. Lextron, Inc., 317 F. 3d 1387, 1392 (Fed. Cir. 2003) (holding that the “jury [is] entitled to hear expert testimony and decide whether to accept or reject it after considering whether predicate facts on which expert relied were accurate” and that the “trial court’s role as gatekeeper is not intended to serve as a replacement for the adversary system.”); *see Daubert v. Merrell Dow Pharmaceuticals, Inc.*, 509 U.S. 579, 596 (1993) (“Vigorous cross-examination, presentation of contrary evidence, and careful instruction on the burden of proof are the traditional and appropriate means of attacking shaky but admissible evidence.”).

Google cites *Plexxikon Inc. v. Novartis Pharms. Corp.*, 2021 WL 2224267 (N.D. Cal. 2021) in support of its Second Preclusion Request, but the instant case differs from the circumstances of *Plexxikon* in numerous ways. In particular, the motion *in limine* granted in *Plexxikon* was very specific and limited in scope, and simply “preclude[d] Plexxikon from (1) describing the ‘core molecular structure’ as its ‘invention.’” *Plexxikon* at 4-5. However, as explained above, Google’s motion seeks to exclude a far broader category of evidence and argument than the Court excluded in *Plexxicon*. The passages of the Khatri report that Google seeks to exclude include passages that reference LPHDR execution units or parallelism even in passing and make no claims regarding “the invention” at all. Granting a motion that seeks to exclude such a broad and ambiguous class of evidence and testimony has no precedent, and accordingly, Google’s motion should be denied.

In summary, granting Google’s motion would preclude Singular from presenting arguments and evidence that are relevant to the questions of infringement, validity, damages, and willfulness, and would thus be unfairly prejudicial to Singular. Accordingly, the Court should deny Google’s motion.

X. GOOGLE'S MOTION IN LIMINE NO. 10

Google's MIL No. 10 should be denied because Dr. Joseph Bates' notes of his conversations with Google executives may be admissible as prior consistent statements or as recorded recollections.

Google's Motion *in Limine* No. 10, like many of its other motions, is premature. It asks the Court to exclude from evidence contemporaneous notes that Dr. Bates kept of conversations about his invention with Google executives, including Astro Teller, Quoc Le, and Jeff Dean, that occurred before Google's infringement of Singular's patent. Contrary to Google's arguments, the notes may be admissible depending how trial testimony develops.

Dr. Bates' notes may be admitted as prior consistent statements pursuant to Fed. R. Evid. 801(d)(1)(B). Under this rule, a statement "is not hearsay" if "[t]he declarant testifies and is subject to cross-examination about a prior statement, and the statement . . . is consistent with the declarant's testimony and is offered . . . to rebut an express or implied charge that the declarant recently fabricated it or acted from a recent improper influence or motive in so testifying; or . . . to rehabilitate the declarant's credibility as a witness when attacked on another ground." *Id.* The "the prior consistent statement must have been made before the alleged influence, or motive to fabricate, arose." *Tome v. United States*, 513 U.S. 150, 158 (1995); see also *United States v. DeSimone*, 488 F.3d 561, 574 (1st Cir. 2007) (explaining Fed. R. Evid. 801(d)(1)(B)).

Dr. Bates' notes may be admissible as prior consistent statements if Google accuses him of fabricating the content of his conversations with Google executives. For example, Dr. Bates' notes state that [REDACTED]

[REDACTED]. Ex. V. Dr. Bates told Dean that he would do so [REDACTED]

from his invention. (*Id.*). [REDACTED]

[REDACTED] Ex. O, at 137. The fact that Dean expressed such [REDACTED]

[REDACTED] tends to show that Google willfully copied Dr. Bates' invention. To the extent that Google expressly or implicitly accuses Dr. Bates of fabricating or exaggerating this conversation, the notes would tend to rehabilitate his testimony, and would therefore be admissible under Rule 801(d)(1)(B).

The notes may also be used as a "recorded recollection." Fed. R. Evid. 803(5) provides: "A record that . . . is on a matter the witness once knew about but now cannot recall well enough to testify fully and accurately . . . was made or adopted by the witness when the matter was fresh in the witness's memory; and . . . accurately reflects the witness's knowledge." Under the rule, if these requirements are met, "the record may be read into evidence but may be received as an exhibit only if offered by an adverse party." *Id.*

Dr. Bates' notes are dated, and he will testify that they reflect his knowledge around the time those conversations occurred. Ex. W, at 156:2-7. Dr. Bates testified at his deposition that he kept the notes because, "when I was 25, I had a really, really good memory, but I'm not anymore. So I have been keeping general notes for a while on -- to help me remember these things . . ." *Id.* at 119:21-120:5.

If Dr. Bates is unable to recall the specifics of his discussions with Google executives at trial, he should be allowed to read these notes into the record under Rule 803(5).

Forbis v. McGinty, 292 F.Supp.2d 160, 161–62 (D.Me.2003) (admitting doctor's notes of patient's statements, which were not properly deemed medical records, under Rule 803(5)); *see also Greger v. Int'l Jensen, Inc.*, 820 F.2d 937, 943 (8th Cir. 1987) (finding court was within discretion admitting diary entry under Rule 803(5) when evidence established witness wrote the

diary, entries were correct at time events occurred, and witness could not recall and testify to events in diary from memory).

XI. GOOGLE'S MOTION IN LIMINE NO. 11

Google's MIL No. 11 seeks to exclude evidence and argument regarding the damage Google did to Singular's ability to succeed. Google MIL No. 11 at 36-39. Google's arguments are contrary to law and fact, and so the motion should be denied.

First, as a matter of law, commercial success is relevant to *Georgia-Pacific* factor 8: "The established profitability of the product made under the patent; *its commercial success*; and its current popularity." *Georgia-Pacific Corp. v. U.S. Plywood Corp.*, 318 F. Supp. 1116, 1120 (S.D.N.Y. 1970) (emphasis added). Of course, commercial success increases the royalty rate, while lack thereof decreases it. *See, e.g., Finjan, Inc. v. Secure Computing Corp.*, 626 F.3d 1197, 1209 (Fed. Cir. 2010). Google's damages expert, Ms. Stamm, recognizes as much and includes analysis of this factor in her report. As she will apparently testify at trial:

Factor 8: The established profitability of the product made under the patent; its commercial success; and its current popularity

Ex. X, ¶¶ 138-140; *see also, e.g., id.* ¶ 126 [REDACTED]

[REDACTED] . . .") (footnote omitted).

In turn, evidence and argument regarding the damage Google did to Singular’s ability to succeed is equally relevant to commercial success, especially if Google chooses to attribute any commercial failure to the allegedly low economic value of Singular’s patents-in-suit, rather than any other factor. In seeking to exclude such evidence and argument under even this circumstance, Google attempts to be the only side permitted to argue about this factor without allowing Singular to respond. But, of course, Singular *is* entitled to rebut Google’s argument and anticipated testimony regarding Singular’s lack of commercial success with its own argument and testimony; in short, Singular is allowed to tell its side of Google’s story. *See, e.g., On Track Innovations Ltd. v. T-Mobile USA, Inc.*, 106 F. Supp. 3d 369, 413-14 (S.D.N.Y. 2015) (“The function of rebuttal evidence is to explain or rebut evidence offered by the other party.”) (quoting *U.S. v. Casamento*, 887 F.2d 1141, 1172 (2nd Cir. 1989)); *Suazo v. Ocean Network Express (N. Am.)*, 20-cv-2016 (ER), 2023 WL 2330428, at *11 (S.D.N.Y. Mar. 2, 2023) (“Rebuttal evidence is properly admissible when it will explain, repel, counteract or disprove the evidence of the adverse party.”) (internal quotation marks omitted) (quoting *Scott v. Chipotle Mexican Grill, Inc.*, 315 F.R.D. 33, 44 (S.D.N.Y. 2016)). Google’s recourse is cross-examination, not exclusion.

Second, as a matter of fact, Google’s impact on Singular’s ability to succeed is demonstrably relevant. Not to put too fine a point on it, but Google is *Google*, the metaphorical eight-hundred-pound gorilla. Google opted to infringe, rather than license Singular’s technology, and Google did so *noisily*. All the while Singular approached other companies in an effort to license and develop its technology, Google told the world at large that Google had itself developed the technology that Singular claimed to have invented and patented. *See, e.g., Ex. Y at 8* (“TPUv2 and TPUv3 use a custom-designed floating point format called bfloat16”). As

a matter of common sense, why would any third-party opt to license Singular’s patents, or even work with Singular, when one of the most powerful companies in the world was claiming to have preempted the field?¹⁷ At the very least, that is a question of fact for the jury, and the jury must be presented with both sides of the argument.

For the reasons given above, Google’s eleventh motion *in limine* should be denied.

XII. GOOGLE’S MOTION IN LIMINE NO. 12

Singular agrees not to present evidence or argument regarding Dr. Bates’ personal financial status, wealth, and any future disposition of assets should Singular prevail. However if Google opens the door to such evidence or argument, Singular reserves the right to use such evidence or argument in rebuttal.

XIII. GOOGLE’S MOTION IN LIMINE NO. 13

Singular agrees not to present evidence or argument regarding non-party statements describing Dr. Bates as a child prodigy or genius. However if Google opens the door to such evidence or argument, Singular reserves the right to use such evidence or argument in rebuttal.

¹⁷ Google also argues that its impact on Singular’s business is not relevant because Singular is not a competitor seeking lost profits. *See* Google’s MIL No. 11 at 37-38. This is (at best) a red herring. First, the technologies at issue require a degree of scaling that was impossible for Singular on its own. Had Google not blocked the field, Singular might well have found an investment partner and been able to become a competitor. Second, the law cited by Google regarding lost profits is (at best) inapt. Google argues that analysis of lost profits is irrelevant when a patentee seeks reasonable royalty. Google’s MIL No. 11 at 38. And yet, *Georgia-Pacific* factor 5—which, of course, only applies to reasonable royalty calculations—focuses on “[t]he commercial relationship between the licensor and licensee, such as, whether they are competitors in the same territory in the same line of business” *Georgia-Pacific*, 318 F. Supp. at 1120.

XIV. GOOGLE'S MOTION IN LIMINE NO. 14

Google's MIL No. 14 should be denied because evidence that Google intentionally withheld incriminating documents in discovery is admissible to show that it willfully infringed the patent and will help the jury to assess credibility.

In Motion *in Limine* No. 14, Google asks the Court to prohibit Singular from introducing evidence that Google knowingly withheld important documents showing that it knew of Singular's invention before it developed the Accused Products. The documents, which Google finally produced on the eve of the original trial date, severely undermine Google's narrative that the individuals responsible for developing the Accused Products were unaware of Dr. Bates and his invention. Contrary to Google's arguments, evidence that Google attempted to cover up evidence of its willfulness is relevant because it tends to show that its infringement was willful.

The Federal Circuit held long ago that "attorney or client misconduct during litigation" over a patent "might be evaluated to determine if the infringer acted willfully in light of the totality of the surrounding circumstances." *Jurgens v. CBK, Ltd.*, 80 F.3d 1566, 1571 (Fed. Cir. 1996); *Bott v. Four Star Corp.*, 807 F.2d 1567, 1572 (Fed. Cir. 1986), overruled on other grounds, *A.C. Aukerman Co. v. R.L. Chaides Const. Co.*, 960 F.2d 1020 (Fed. Cir. 1992) ("In determining whether an infringer acted in bad faith as to merit an increase in damages awarded against him, the court will consider the totality of the circumstances, including . . . the infringer's behavior as a party to the litigation.") (internal citation omitted); *Mobil Oil Corp. v. Amoco Chemicals Corp.*, 779 F. Supp. 1429, 1484 (D. Del. 1991), aff'd sub nom. *Mobil Oil Corp. v. Amoco Chem. Co.*, 980 F.2d 742 (Fed. Cir. 1992) (same); *Chiron Corp. v. Genentech, Inc.*, 268 F. Supp. 2d 1117, 1120 (E.D. Cal. 2002) (denying motion for summary judgment on claim of willful infringement, holding that "an infringer's bad faith in litigation" is one of several

“[f]actors for the fact-finder to consider” in determining whether a defendant’s infringement was willful). Of course, “[t]he ultimate fact to be proven” is “that the infringement was willful, not that litigation activities were improper.” *Jurgens*, 80 F.3d at 1571. Nonetheless, while litigation bad faith is “not *sufficient* for an increased damages award,” *Jurgens*, 80 F.3d at 1570 (emphasis supplied), it “may be taken into account” in assessing an infringer’s willfulness. *Chiron Corp.*, 268 F. Supp. 2d at 1120 n. 3, quoting *Jurgens*, 80 F.3d at 1570.

The kind of bad faith that a jury may consider in assessing willfulness includes that an infringer “deliberately withheld documents” relating to a fact in issue. *Chiron Corp.*, 268 F. Supp. 2d 1124 n. 5 (infringer’s withholding of documents in bad faith supported determination of genuine issue of fact on willful infringement). In particular, the act of “hiding documents” that “may have indicated willful infringement . . . is easily relevant to the issue of willful infringement.” *THK Am., Inc. v. NSK, Ltd.*, 917 F. Supp. 563, 574 (N.D. Ill. 1996) (denying alleged infringer’s motion to bar plaintiff from introduction evidence of court-imposed sanction for infringer’s over designation of documents as Attorneys Eyes Only to frustrate development of willfulness case).

Here, Google’s deliberate withholding of documents that “may have indicated willful infringement” is plainly probative of whether Google willfully infringed. *THK Am., Inc.*, 917 F. Supp. at 574. Google has acknowledged that early in this case, it identified [REDACTED]

[REDACTED]
to an unknown number of Google employees, including [REDACTED]

[REDACTED] Yet, Google chose not to produce that email in discovery until July 2023, two months before the scheduled start of trial. After Singular demanded supplementation of Google’s document production, it coughed up more emails, including one showing that [REDACTED]

[REDACTED]
[REDACTED] Khatri Dec., Ex. D. Dean responded to that email: [REDACTED]
[REDACTED]
[REDACTED] (*Id.*). At his supplemental deposition on November 14, 2023, Dr. Dean was forced to admit that he had been [REDACTED]
[REDACTED] Ex. Z at 64.

Singular should be permitted to introduce evidence that Google knowingly withheld documents demonstrating [REDACTED] long before the development of the accused product. This, combined with Dr. Dean's false testimony at his 2021 deposition [REDACTED] tends to show that Google had a strategy to cover up its willfulness: it would (1) withhold the most damning documents showing it copied the invention; (2) develop a false narrative of innocent infringement; (3) hope the patent would be deemed invalid; and (4) only produce the inconvenient documents if push came to shove and the case proceeded to trial. This is the kind of litigation misconduct that, under the totality of the circumstances, a fact-finder might deem probative in determining whether Google's infringement was willful.¹⁸

The cases cited by Google about the admissibility of "discovery disputes" are not helpful. Most of them do not addresses whether a party's knowing failure to produce relevant documents

¹⁸ That Google would engage in such a strategy is hardly fanciful. Google has recently been subjected to significant discovery sanctions for intentional spoliation of evidence and failure to adhere to court orders. *In re Google Play Store Antitrust Litig.*, No. 21-MD-02981-JD, 2023 WL 2673109, at *8 (N.D. Cal. Mar. 28, 2023) (imposing discovery sanctions for Google's knowing failure to preserve internal chat messages, finding that one "major concern is the intentionality manifested at every level within Google to hide the ball with respect to Chat."); *Brown v. Google LLC*, No. 20CV03664YGRSVK, 2022 WL 2789897, at *2 (N.D. Cal. July 15, 2022) (imposing sanction of \$971,715.09 to be paid by Google to Plaintiffs as a monetary sanction for discovery misconduct).

going to willful infringement is evidence of willfulness. *CardiAQ Valve Techs., Inc. v. Neovasc Inc.*, No. 14-CV-12405-ADB, 2016 WL 8203206, at *1 (D. Mass. Apr. 25, 2016) (excluding evidence of discovery dispute by which list of alleged trade secrets was generated); *Mformation Techs., Inc. v. Rsch. in Motion Ltd.*, No. C 08-04990 JW, 2012 WL 2339762, at *2 (N.D. Cal. June 7, 2012) (excluding evidence of discovery dispute over plaintiff's delayed production of source code, but allowing evidence of changes to interrogatory answers as going to credibility); *Thompson v. Glenmede Tr. Co.*, No. 92-5233, 1996 WL 529693 (E.D. Pa. Sept. 17, 1996) (case about stock buy-back); *Tutein v. Ford Motor Co.*, No. SX-210-CV-018, 2016 WL 11212415, *2 (V.I. Super. Dec. 23, 2016) (personal injury case). The only case Google cites that involves analysis of willfulness, *Solutran, Inc. v. U.S. Bancorp*, No. 013CV02637SRNBRT, 2018 WL 1050403, at *2 (D. Minn. Feb. 26, 2018), acknowledged that “attempting to cover up infringement is one factor that can be considered to evaluate a claim of willfulness.” *Id.* However, the evidence at issue there – the terms of the defendant’s standard document retention policy – was not relevant because there was no “evidence to show that the document-retention policy was intentionally employed to cover up the infringement of Plaintiff’s patent.” *Id.* Here, by contrast, the evidence would permit the jury to infer that Google collected evidence of willful infringement and then intentionally covered it up.

Nor is the probative nature of the evidence outweighed by unfair prejudice to Google under Rule 403. The court in *THK Am., Inc.* rejected just such an argument when it allowed the plaintiff to introduce evidence of a discovery sanction in support of its claim of willful infringement. 917 F. Supp. at 574. It observed that “[a]ll evidence brought by any party is designed, in one way or another, to prejudice the opponent’s case. It is only unfair prejudice that concerns this Court.” *Id.*; compare *In re PHC, Inc. S’holder Litig.*, 894 F.3d 419, 440 (1st Cir.

2018) (“[v]irtually all evidence is meant to be prejudicial, and Rule 403 only guards against unfair prejudice.”), quoting *United States v. Sabean*, 885 F.3d 27, 38 (1st Cir. 2018). As shown above, the caselaw allows the introduction of litigation misconduct to support a claim of willful infringement, such evidence is not inherently more prejudicial than probative, and admission of this targeted, focused evidence will not devolve into a relitigation of “discovery disputes” that the jury cannot understand.

In addition to its relevance to Google’s willfulness, evidence that it withheld documents that contradicted its narrative of innocent infringement is proper material for impeachment of Google witnesses. “[T]he issue of willfulness not only raises issues of reasonableness and prudence, but is often accompanied by questions of intent, belief, and credibility . . .” *SRI Int’l, Inc. v. Advanced Tech. Lab’ys, Inc.*, 127 F.3d 1462, 1465 (Fed. Cir. 1997) (emphasis supplied). In particular, the belatedly produced documents contradict the testimony of [REDACTED] at their 2021 depositions about whether and when they knew of Dr. Bates. These witnesses were both re-deposed after the disclosure of the subject documents. Practically speaking, the fact that these documents were disclosed after the initial testimony of these witnesses must be mentioned during this questioning – otherwise, the cross-examination would be rendered unduly artificial and confusing. In any event, as with other issues raised in Google’s motions *in limine*, the better time to address the matter is at trial, with a proper foundation in questioning for the evidence at issue.

Dated: December 13, 2023

Respectfully submitted,

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LOCAL RULE 7.1 CERTIFICATION

I, Kevin Gannon, counsel for Singular Computing LLC, hereby certify that I conferred with counsel for Google LLC to resolve the issues presented in this motion but, after a good faith attempt to reach agreement, the parties were unable to do so.

/s/ Kevin Gannon

CERTIFICATE OF SERVICE

I hereby certify that all counsel of record who have consented to electronic service are being served with a copy of this document via the Court's CM/ECF system.

/s/ Kevin Gannon